

CLAIMS

1. A container conveying system for conveying containers containing substrates such as wafers and reticles within a clean room, said container conveying system comprising:

a conveyance apparatus disposed substantially in parallel with a plurality of treatment apparatuses to convey said containers; and

a transfer apparatus capable of moving freely in an upper ceiling space within said clean room,

said plural treatment apparatuses being arranged on at least one side of a passage and respectively provided with interface devices on the side facing said passage,

said interface devices capable of temporarily receiving said containers and moving said substrates from the interiors of said containers to the interiors of said treatment apparatuses and vice versa in a hermetically sealed atmosphere, and

said transfer apparatus delivering and receiving said containers between said conveyance apparatus and said treatment apparatuses or between said treatment apparatuses.

2. The container conveying system according to claim 1, wherein said conveyance apparatus has a plurality of conveyance paths and conveyance apparatus units capable of independently traveling along each of said conveyance paths.

3. The container conveying system according to claim 2, wherein said plural conveyance paths are arranged vertically in parallel.

4. The container conveying system according to claim 2, wherein said plural conveyance paths are arranged transversely in parallel.

5. The container conveying system according to any of claims 2 to 4, wherein each of said conveyance apparatus units is constituted by a conveyor.

6. The container conveying system according to any of claims 1 to 5, wherein said transfer apparatus comprises at least two transfer apparatus units.

7. A container conveying system for conveying containers containing substrates such as wafers and reticles within a clean room, said container conveying system comprising:

a conveyance apparatus disposed substantially in parallel with a plurality of treatment apparatuses in an upper ceiling space within said clean room to convey said containers; and

a transfer apparatus capable of moving freely in a vertical plane extending along said conveyance apparatus in said upper ceiling space within said clean room,

said plural treatment apparatuses arranged on at least one side of a passage and respectively provided with interface devices on the side facing said passage,

said interface devices capable of temporarily receiving said containers and moving said substrates from the interiors of said containers to the interiors of said treatment apparatuses and vice versa in a hermetically sealed atmosphere, and

said transfer apparatus delivering and receiving said containers between said conveyance apparatus and said treatment apparatuses or between said treatment apparatuses.

8. The container conveying system according to claim 7, wherein a plurality of branch conveyance paths are provided at appropriate intervals in the conveyance direction of said conveyance apparatus, said plural branch conveyance paths designed for receiving said containers having been conveyed by said conveying apparatus and allowing the containers to stand by; and

said transfer apparatus holds said containers standing by on said

plural branch conveyance paths and delivers the containers to any of said plural treatment apparatuses.

9. The container conveying system according to claim 7 or claim 8, wherein said plural treatment apparatuses are arranged on both sides of said passage,

said conveyance apparatus has two conveyance apparatus units traveling respectively along two conveyance paths which are a going path and a returning path, and

said transfer apparatus is provided on the right and left sides of said conveyance apparatus.

10. The container conveying system according to claim 9, wherein said two conveyance paths are arranged transversely in parallel.

11. The container conveying system according to claim 9, wherein said two conveyance paths are arranged vertically in parallel.